

Substitute Form PTO-1449

(Modified)

U.S. Department of Commerce  
Patent and Trademark Office

Attorney's Docket No.

16969-037001

Application No.

10/617,750

**Information Disclosure Statement  
by Applicant**

(Use several sheets if necessary)

(37 CFR 1.98(b))

Applicant

Zhaowei Liu et al.

Filing Date

July 14, 2003

Group Art Unit

1753

**U.S. Patent Documents**

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
an	AA	5,066,377	11/19/1991	Rosenbaum et al.			
an	AB	5,734,058	3/31/1998	Lee			
an	AC	5,736,025	4/7/1998	Smith et al.			
an	AD	5,998,147	12/7/1999	Petit et al.			
an	AE	6,017,704	1/25/2000	Herman et al.			
an	AF	6,265,171	7/24/2001	Herman et al.			
an	AG	6,265,557	7/24/2001	Diamond et al.			
an	AH	2002/0012902	1/31/2002	Fuchs et al.			
an	AI	6,475,721	11/5/2002	Kleiber et al.			
an	AJ	6,486,309	11/26/2002	Gerber et al.			
an	AK	6,613,508	9/2/2003	Ness et al.			

**Foreign Patent Documents or Published Foreign Patent Applications**

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
an	AL	WO 96/24687	8/15/1996	PCT				
an	AM	WO 97/40184	10/30/1997	PCT				
an	AN	WO 01/77386	10/18/2001	PCT				
an	AO	WO 02/31199	4/18/2002	PCT				

**Other Documents (include Author, Title, Date, and Place of Publication)**

Examiner Initial	Desig. ID	Document
an	AP	Abrams et al., "Comprehensive Detection of Single Base Changes in Human Genomic DNA Using Denaturing Gradient Gel Electrophoresis and a GC Clamp," Genomics, Vol. 7, pp. 463-475 (1990)
an	AQ	Alper, Joseph, "Biotechnology: Weighing DNA for Fast Genetic Diagnosis," Science Magazine, Vol. 279:5359, pp. 2044-2045 (1998)
an	AR	Chee et al., "Accessing Genetic Information with High-Density DNA Arrays," Science Magazine, vol. 274, No., 5287, October 1996, pgs. 610-614 (pgs. 1-13)
an	AS	Gelfi et al., "Detection of point mutations by capillary electrophoresis in liquid polymers in temporal thermal gradients," Electrophoresis, 1994, vol. 15, pgs. 1506-1511
an	AT	Henco et al., "Quantitative PCR: the determination of template copy numbers by temperature gradient gel electrophoresis (TGGE)," Nucleic Acids Research, vol. 18, No. 22, pgs. 6733-6734

Examiner Signature

*Allen Nazareno*

Date Considered

9/25/06

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 16969-037001	Application No. 10/617,750
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)		Applicant Zhaowei Liu et al.	
		Filing Date July 14, 2003	Group Art Unit 1753
(37 CFR §1.98(b))			

Examiner Initial	Desig. ID	Document
An	AU	Igloi, Gabor L., "Automated Detection of Point Mutations by Electrophoresis in Peptide-Nucleic Acid-Containing Gels", BioTechniques, 27:798-808 (1999)
An	AV	Ke et al., "Selecting DNA fragments for mutation detection by temperature gradient gel electrophoresis: Application to the p53 gene cDNA," Electrophoresis, 1993, vol. 14, pgs. 561-565
An	AW	Khrapko et al., "Constant denaturant capillary electrophoresis (CDCE): a high resolution approach to mutational analysis," Nucleic Acids Research, 1994, vol. 22, No. 3, pgs. 364-369
An	AX	Myers et al., "Detection of single base substitutions in total genomic DNA," Nature, February 1985, vol. 313, pgs. 495-498
An	AY	Ray et al., "Peptide nucleic acid (PNA): its medical and biotechnical applications and promise for the future", Department of Physical Chemistry, Chalmers University of Technology, S 412 96, Gothenburg, Sweden, pp. 1041-1060
An	AZ	Riesner et al., "Temperature-gradient gel electrophoresis of nucleic acids: Analysis of conformational transitions, sequence variations, and protein-nucleic acid interactions," Electrophoresis, 1989, vol. 10, pgs. 377-389
An	AAA	Riesner et al., "Temperature-gradient gel electrophoresis for the detection of polymorphic DNA and for quantitative polymerase chain reaction," Electrophoresis, 1992, vol. 13, pgs. 632-636
An	ABB	Sidransky, David, "Nucleic Acid-Based Methods for the Detection of Cancer," Science, vol. 278, November 7, 1997, www.sciencemag.org, pgs. 1054-1058
An	ACC	Taylor et al., "Detection of Mutations and Polymorphisms on the WAVE™ DNA Fragment Analysis System," TRANSGENOMIC, Application Note 101
An	ADD	Wang, David G., "Large-Scale Identification, Mapping, and Genotyping of Single-Nucleotide Polymorphisms in the Human Genome," Science, vol. 280, May 15, 1998, pgs. 1077-1082
An	AEE	Wartell et al., "Detecting single base substitutions, mismatches and bulges in DNA by temperature gradient gel electrophoresis and related methods", Journal of Chromatography, pp. 169-185 (1998)
An	AFF	Wiese et al., "Scanning for mutations in the human prion protein open reading frame by temporal temperature gradient gel electrophoresis", Electrophoresis, pp. 1851-1860 (1995)
An	AGG	"High-Throughput Detection of Unknown Mutations By Using Multiplexed Capillary Electrophoresis With Polyvinylpyrrolidone Solution", The Ames Laboratory, U.S. Department of Energy by Iowa State University, pp. 1-28
An	AHH	Qiufeng Gao et al., 25. High-Speed High-Throughput Mutation Detection, <a href="http://www.ornl.gov/sci/techresources/Human_Genome/publicat/00santa/25.html">http://www.ornl.gov/sci/techresources/Human_Genome/publicat/00santa/25.html</a> , Research Abstracts, 2000, DOE Human Genome Program
An	AII	entries for "Peltier Effect", "thermoelectric heating", "thermoelectric cooling" and "thermoelectric cooler" in the McGraw-Hill Encyclopedia of Science & Technology Online. Downloaded on June 6, 2005

Examiner Signature	<i>Albert H. Hager</i>	Date Considered	9/25/06
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

**LIST OF REFERENCES CITED BY APPLICANT**  
 (Use several sheets if necessary)

ATTY DOCKET NO.

9046-059-999

APPLICATION NO

10/617,750

APPLICANT

Z. LIU et al.

FILING DATE

July 14, 2003

GROUP

1753

**U.S. PATENT DOCUMENTS**

INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
an	A01	6,398,933 B1	6/2002	Scott	204	466	
an	A02	US2002/0042060 A1	4/2002	Raees et al.	435	6	
an	A03	6,036,831	3/2000	Bishop	204	618	
an	A04	5,935,522	8/1999	Swerdlow et al.	422	70	
an	A05	5,871,908	2/1999	Henco et al.	435	6	
an	A06	5,795,720	8/1998	Henco et al.	435	6	
an	A07	5,068,176	11/1991	Vijg et al.	435	6	
	A08						
	A09						


**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION *Abstract Only	
							YES	NO
an	B01	WO 96/08715	3/1996	PCT	—	—		
an	B02	WO 91/02815	3/1991	PCT	—	—	*X	
an	B03	0 329 341 A2	8/1989	Europe	—	—		
	B04							
	B05							

**OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)**

an	C01	International Preliminary Examination Report from PCT/US01/27440, mailed January 9, 2003.						
an	C02	Gao et al., "High-Throughput Detectin of Unknown Mutations by Using Multiplexed Capillary Electrophoresis With Poly(vinylpyrrolidone) Solution," June 1, 2000, <u>Analytical Chemistry</u> , Vol. 72, No. 11, pp 2499-2506.						
an	C03	Schell et al., "Detection of point mutations by capillary electrophoresis with temporal temperature gradients," 1999, <u>Electrophoresis</u> , Vol. 20, pp 2864-2869.						

EXAMINER



DATE CONSIDERED

9/25/06

\*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.